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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,698	11/29/2006	Damian Fiolka	20228-013US1 HF 06 179	5439
26161	7590	04/09/2009	EXAMINER	
FISH & RICHARDSON PC			CALLAWAY, JADE R	
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MINNEAPOLIS, MN 55440-1022			PAPER NUMBER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,698	<b>Applicant(s)</b> FIOLKA ET AL.	
	<b>Examiner</b> JADE R. CALLAWAY	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 1/27/09, 12/18/08, 2/6/09, 3/12/09.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 82-84, 93, 103, 104, 110, 115, 117-120, 123 and 124 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 123 and 124 is/are allowed.
- 6) ☒ Claim(s) 82, 83, 93, 110 and 117-120 is/are rejected.
- 7) ☒ Claim(s) 84, 103, 104 and 115 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/18/08, 2/6/09, 3/12/09</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the claims, in the submission dated 1/27/09, are acknowledged and accepted.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 82-84, 93, 103, 104, 110, 115, 117-120, 123-124 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because of the use of the phrase "consisting of." Correction is required. See MPEP § 608.01(b).

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 82, 83, 93, 110, and 117-120 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 4, 10, 11, 13, 28, and 35-38 of copending Application No. 12/200068. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Consider claim 82, the Fiolka et al. ('068) application discloses an optical element, comprising: a polarization-modulating optical element comprising an optically active crystal having an optical axis, the polarization-modulating optical element having a thickness profile that, as measured in the direction of the optical axis, is variable, wherein the polarization-modulating optical element is configured to transform an entering light bundle with a first linear polarization distribution into an exiting light bundle with a second linear polarization distribution different from the first linear polarization distribution, and the second linear polarization distribution is an approximately tangential polarization distribution, and wherein the polarization-modulating optical element

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comprises at least two planar-parallel portions of different thicknesses or different optical effective thickness [see claims 1, 3, 4 and 10].

Consider claim 83, the Fiolka et al. ('068) application discloses an optical element wherein: when a first linearly polarized light ray passes through the optical element, a plane of oscillation of the first linearly polarized light ray is rotated by a first angle; and when a second linearly polarized light ray passes through the optical element, a plane of oscillation of the second linearly polarized light ray is rotated by a second angle different from the first angle [see claim 13].

Consider claim 93, the Fiolka et al. ('068) application discloses an optical element wherein the at least two planar-parallel portions are configured as rectangular raster elements [see claim 11].

Consider claim 110, the Fiolka et al. ('068) application discloses an optical arrangement, comprising: a polarization-modulating optical element; and a second polarization-modulating optical element arranged so that, when light passes through the optical arrangement, the light can pass through the first and second polarization-modulating elements [see claim 28].

Consider claim 117, the Fiolka et al. ('068) application discloses a system, comprising: an illumination system; a projection objective, and an optical element in the illumination system, wherein the system is a microlithography optical system [see claim 35].

Consider claim 118, the Fiolka et al. ('068) application discloses a system, comprising: an illumination system; a projection objective, and an optical element in the

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illumination system, wherein the system is a microlithography optical system [see claim 36].

Consider claim 119, the Fiolka et al. ('068) application discloses a system further comprising: a substrate; and an immersion medium with a refractive index different from air is between the substrate and an optical element nearest to the substrate [see claim 37].

Consider claim 120, the Fiolka et al. ('068) application discloses a method, comprising manufacturing a micro-structured semiconductor component using a system in accordance with claim 117 [see claim 38].

7. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

8. Claims 84, 103, 104, and 115 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 123 and 124 are allowed.

Claim 123 is allowable over the prior art of record for at least the reason that even though the prior art discloses an optical element, comprising: a polarization-modulating optical element comprising an optically active crystal having an optical axis, the polarization modulating optical element having a thickness profile that, as measured in the first direction of the optical axis, is variable, a first group of substantially planar-parallel portions; wherein the polarization-modulating optical element is configured to

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transform an entering light bundle with a first linear polarization distribution into an exiting light bundle with a second linear polarization distribution different from the first linear polarization distribution, and the second linear polarization distribution is an approximately tangential polarization distribution, wherein linearly polarized light passes through the optical element, a plane of oscillation of the linearly polarized light is rotated by a first angle  $\beta_1$  of rotation by the first portions, however the prior art fails to teach or reasonably suggest a second group of substantially planar-parallel portions, wherein when linearly polarized light passes through the optical element, a plane of oscillation of the linearly polarized light is rotated by a second angle  $\beta_2$  by the second group of substantially planar-parallel portions, and  $\beta_1$  and  $\beta_2$  are approximately conforming to the expression  $|\beta_2 - \beta_1| = (2n+1) \cdot 90^\circ$ , with  $n$  representing an integer having a value that is greater than or equal to zero. Claim 124 is dependent on claim 123 and is allowable for at least the same reasons claim 123 is allowable.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marie (4,175,830) discloses a wave mode converter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JADE R. CALLAWAY whose telephone number is (571)272-8199. The examiner can normally be reached on Monday to Friday 7:00 am - 4:30 pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRC  
/JADE R. CALLAWAY/  
Examiner, Art Unit 2872

/Arnel C. Lavarias/  
Primary Examiner, Art Unit 2872